

Appl. No. 10/708,047
Amdt. dated November 03, 2005
Reply to Office action of August 04, 2005

AMENDMENTS TO THE CLAIMS

1. (original) A light-emitting device with compound substrate comprising:
a compound substrate comprising a high thermal conductive layer and a substrate
5 disposed around the high thermal conductive layer;
an adhesive layer formed on the compound substrate; and
a light-emitting stack layer formed on the adhesive layer.
2. (original) The light-emitting device of claim 1 wherein the adhesive layer is a
10 transparent adhesive layer.
3. (original) The light-emitting device of claim 2 wherein the adhesive layer is a
conductive transparent adhesive layer.
- 15 4. (original) The light-emitting device of claim 2 wherein the adhesive layer is an
insulating transparent adhesive layer.
5. (original) The light-emitting device of claim 1 wherein the adhesive layer is an
opaque adhesive layer.
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6. (original) The light-emitting device of claim 5 wherein the adhesive layer is a
conductive opaque adhesive layer.
- 25 7. (original) The light-emitting device of claim 5 wherein the adhesive layer is an
insulating opaque adhesive layer.
8. (original) The light-emitting device of claim 1 further comprising a first reaction
layer between the compound substrate and the adhesive layer.

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9. (original) The light-emitting device of claim 1 further comprising a second reaction layer between the adhesive layer and the light-emitting stack layer.

5 10. (original) The light-emitting device of claim 8 further comprising a metal reflecting layer between the compound substrate and the first reaction layer.

11. (original) The light-emitting device of claim 9 further comprising a metal reflecting layer between the second reaction layer and the light-emitting stack layer.

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12. (original) The light-emitting device of claim 11 further comprising a transparent conductive layer between the metal reflecting layer and the light-emitting stack layer.

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13. (original) The light-emitting device of claim 1 wherein the adhesive layer is a metal adhesive layer.

14. (original) The light-emitting device of claim 1 wherein the adhesive layer is a metal reflecting adhesive layer.

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15. (original) The light-emitting device of claim 1 further comprising a connection layer between the high thermal conductive layer and the substrate.

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16. (original) The light-emitting device of claim 1 wherein the high thermal conductive layer comprises at least one material selected from a material group consisting of Cu, Al, Au, Ag, W, and alloys of these metals, or other substitute materials.

17. (original) The light-emitting device of claim 15 wherein the connection layer

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comprises at least one material selected from a material group consisting of indium tin oxide, GeAu, BeAu, Au, SiNx, SiO₂, Cu, Ti, and Pd, or other substitute materials.

- 5 18. (original) The light-emitting device of claim 1 wherein the substrate comprises at least one material selected from a material group consisting of Si, GaAs, Ge, Al₂O₃, glass, InP, and GaP, or other substitute materials.
- 10 19. (currently amended) The light-emitting device of claim 2 wherein the transparent adhesive layer comprises at least one material selected from a material group consisting of PI, BCB, and PFCB, polyimide (PI), benzocyclobutane (BCB), and perfluorocyclobutene (PFCB), or other substitute materials.
- 15 20. (currently amended) The light-emitting device of claim [[15]] 3 wherein the conductive transparent adhesive layer comprises at least one material selected from a material group consisting of intrinsically conducting polymer and polymer doped with a conductive material, or other substitute materials.
- 20 21. (original) The light-emitting device of claim 20 wherein the conductive material comprises at least one material selected from a material group consisting of indium tin oxide, cadmium tin oxide, antimony tin oxide, zinc oxide, zinc tin oxide, Au, and Ni/Au, or other substitute materials.
- 25 22. (original) The light-emitting device of claim 13 wherein the metal adhesive layer comprises at least one material selected from a material group consisting of In, Sn, Al au, Pt, Zn, Ge, Ag, Ti, Pb, Pd, Cu, and alloys of these metals, or other substitute materials.

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23. (original) The light-emitting device of claim 14 wherein the metal reflecting adhesive layer comprises at least one material selected from a material group consisting of In, Sn, Al au, Pt, Zn, Ge, Ag, Ti, Pb, Pd, Cu, and alloys of these metals, or other substitute materials.

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24. (original) The light-emitting device of claim 1 wherein the light-emitting stack layer comprises at least one material selected from a material group consisting of AlGaN_xP, AlInGaN, and AlGaAs series, or other substitute materials.

10 25. (original) The light-emitting device of claim 8 wherein the first reaction layer comprises at least one material selected from a material group consisting of SiNx, Ti, and Cr, or other substitute materials.

15 26. (original) The light-emitting device of claim 9 wherein the second reaction layer comprises at least one material selected from a material group consisting of SiNx, Ti, and Cr, or other substitute materials..